

FIG. 1

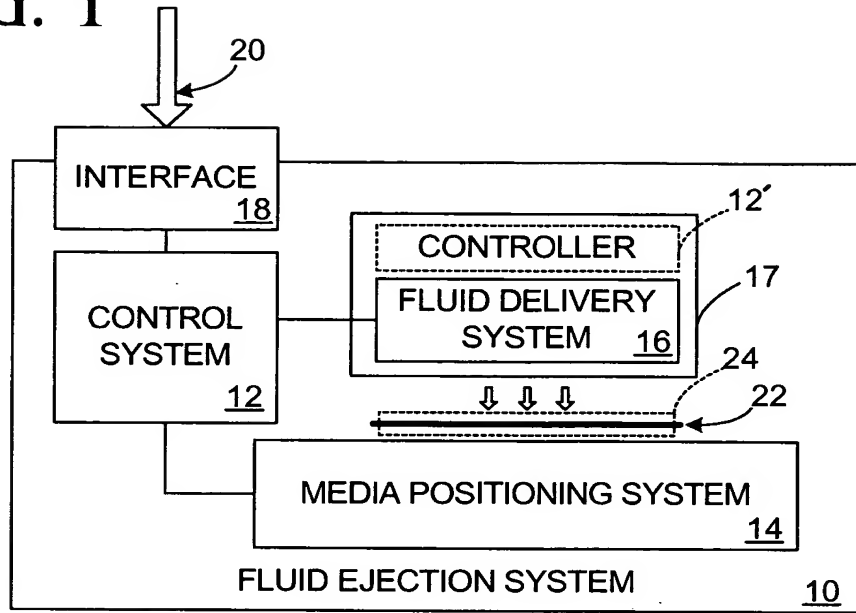


FIG. 2

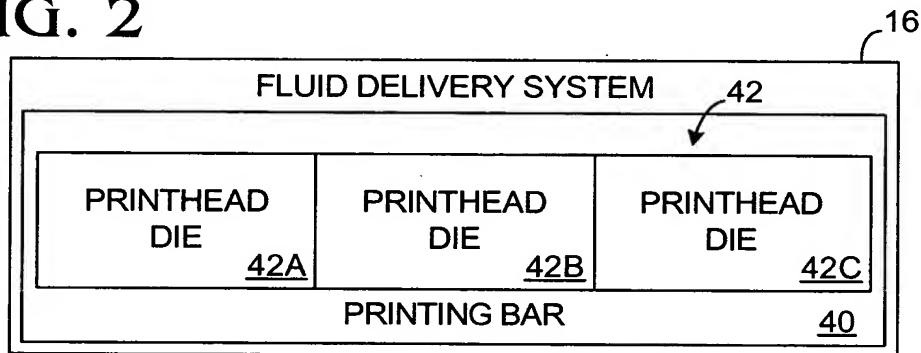


FIG. 3

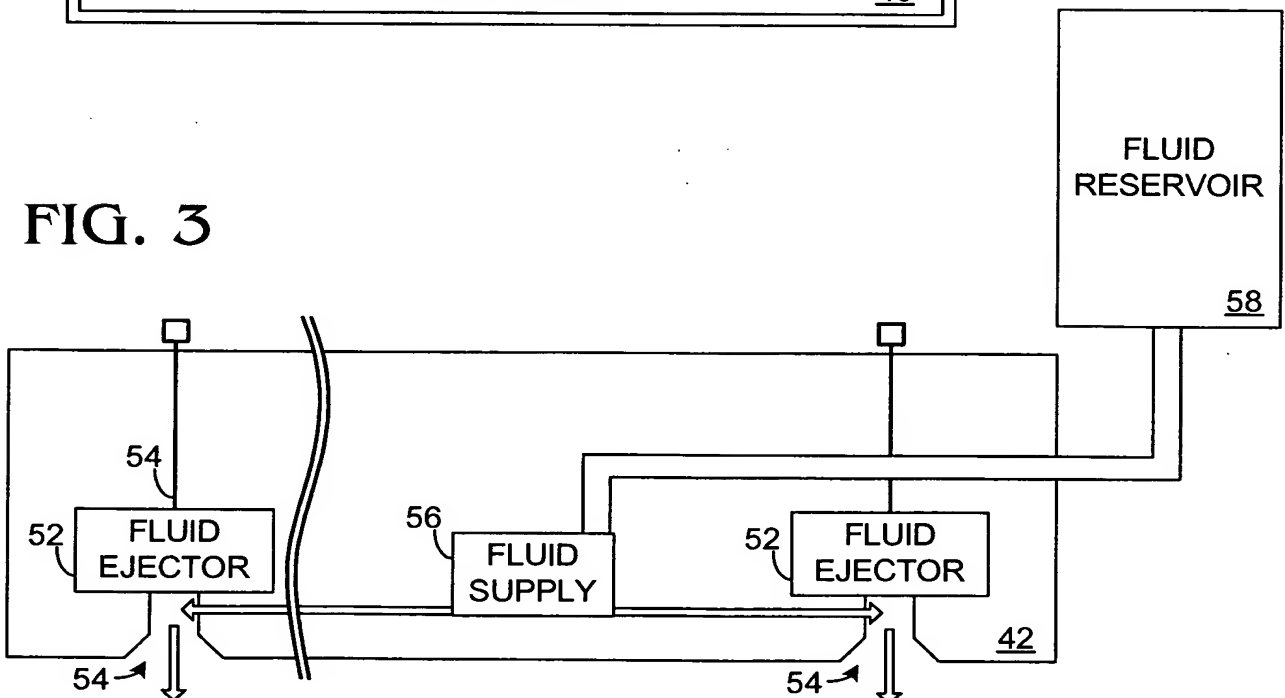


FIG. 4

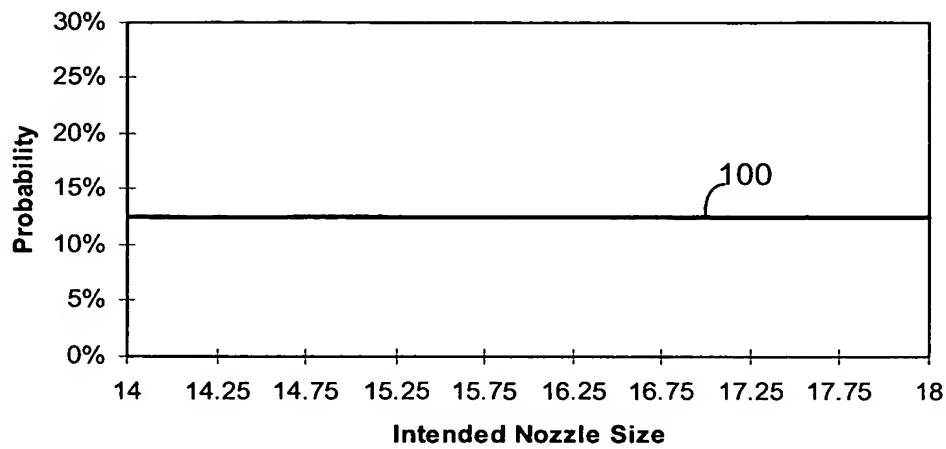


FIG. 5

TABLE 1 – Uniform Probability Distribution	
Subinterval (micrometers)	Probability (%)
[14, 14.5)	12.5
[14.5, 15)	12.5
[15, 15.5)	12.5
[15.5, 16)	12.5
[16, 16.5)	12.5
[16.5, 17)	12.5
[17, 17.5)	12.5
[17.5, 18]	12.5

FIG. 7

TABLE 2 – Normal Probability Distribution	
Subinterval (micrometers)	Probability (%)
[14, 14.5)	9
[14.5, 15)	10
[15, 15.5)	13
[15.5, 16)	18
[16, 16.5)	18
[16.5, 17)	13
[17, 17.5)	10
[17.5, 18]	9

FIG. 6

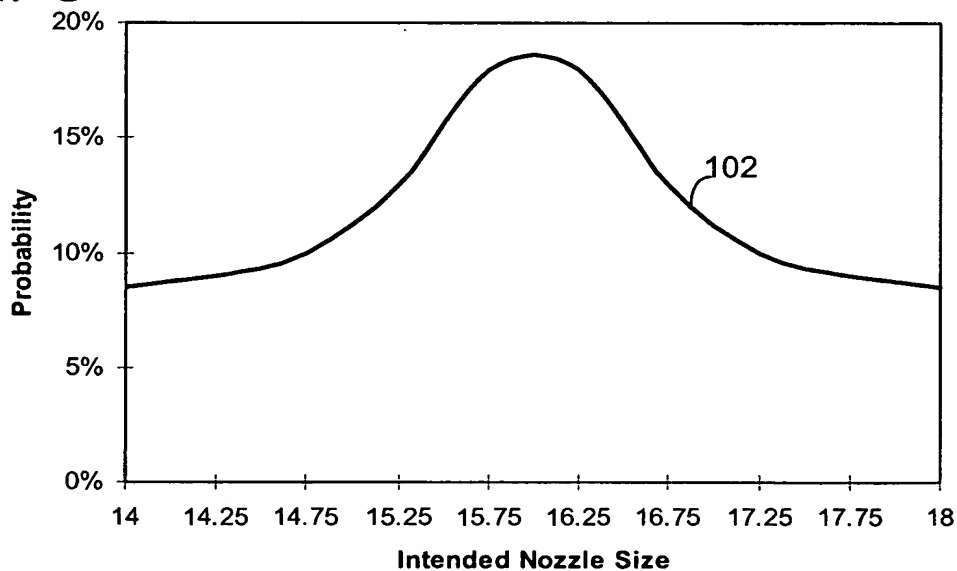


FIG. 8

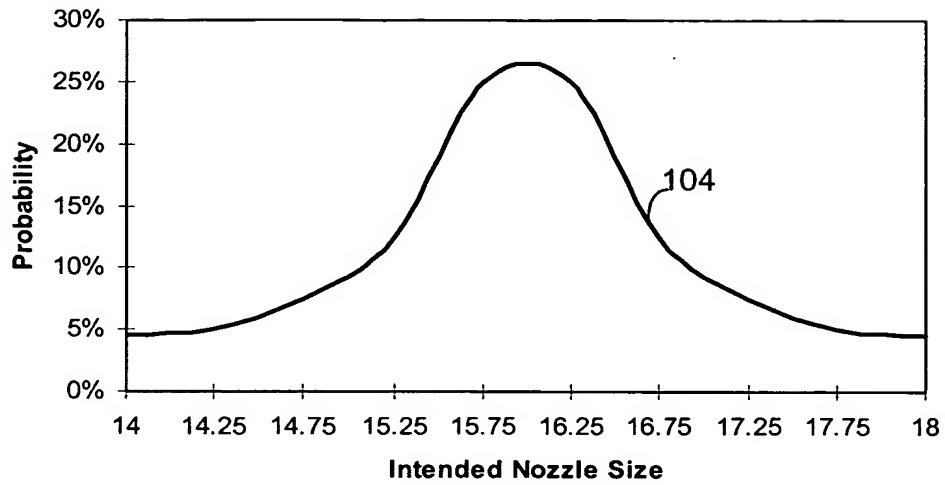


FIG. 9

TABLE 3 – Normal Probability Distribution	
Subinterval (micrometers)	Probability (%)
[14, 14.5)	5
[14.5, 15)	7.5
[15, 15.5)	12.5
[15.5, 16)	25
[16, 16.5)	25
[16.5, 17)	12.5
[17, 17.5)	7.5
[17.5, 18]	5

FIG. 10

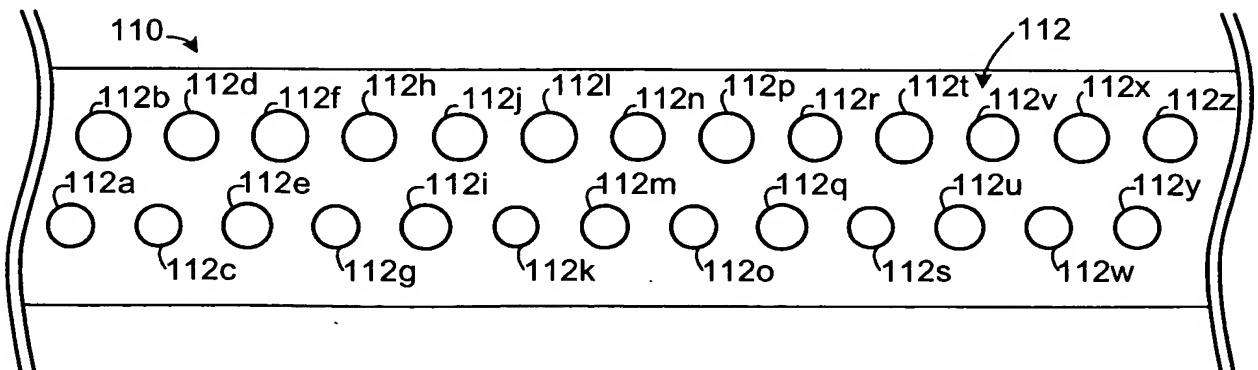


FIG. 11

TABLE 4 – Nozzle Size and Position					
Nozzle	Nozzle Position	Size (micrometers)	Nozzle	Nozzle Position	Size (micrometers)
112a	1	15.0	112n	14	16.6
112b	2	17.1	112o	15	14.9
112c	3	14.4	112p	16	17.3
112d	4	16.8	112q	17	15.8
112e	5	15.7	112r	18	16.5
112f	6	17.8	112s	19	14.3
112g	7	14.8	112t	20	17.7
112h	8	16.7	112u	21	15.4
112i	9	15.6	112v	22	16.0
112j	10	16.4	112w	23	14.5
112k	11	14.1	112x	24	17.0
112l	12	17.5	112y	25	14.6
112m	13	15.0	112z	26	16.4

FIG. 12

TABLE 5 – Uniform Nozzle Distribution	
Subinterval	Number of Nozzles within Subinterval
[14, 14.5)	3
[14.5, 15)	4
[15, 15.5)	3
[15.5, 16)	3
[16, 16.5)	3
[16.5, 17)	4
[17, 17.5)	3
[17.5, 18]	3

FIG. 13

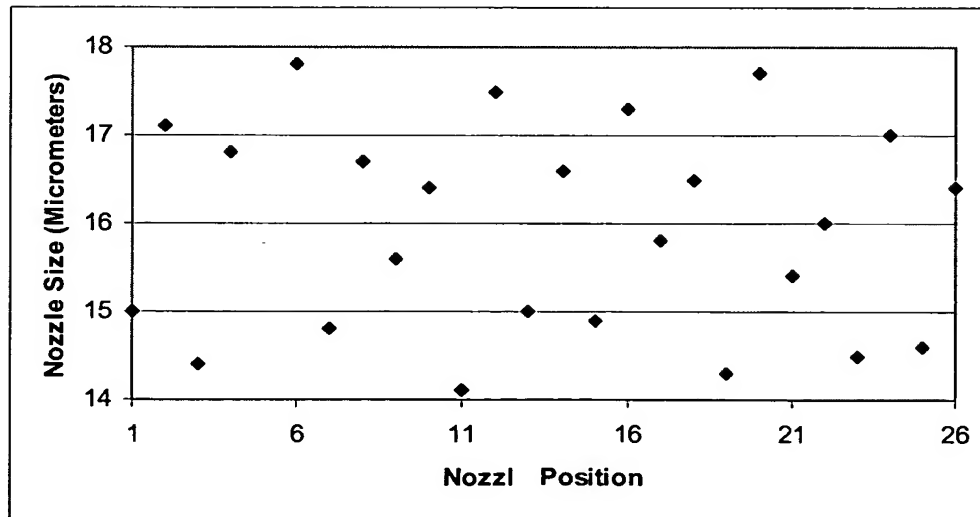


FIG. 14

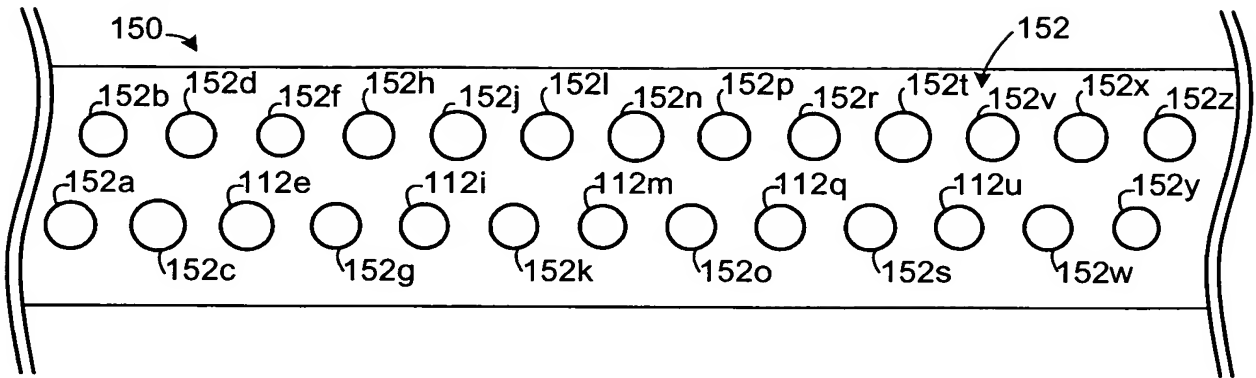


FIG. 15

TABLE 6 – Nozzle Size and Position					
Nozzle	Nozzle Position	Size (micrometers)	Nozzle	Nozzle Position	Size (micrometers)
152a	1	16.4	152n	14	17.3
152b	2	15.1	152o	15	15.7
152c	3	17.6	152p	16	16.2
152d	4	15.6	152q	17	15.4
152e	5	16.8	152r	18	16.1
152f	6	14.4	152s	19	15.9
152g	7	15.7	152t	20	17.2
152h	8	16.1	152u	21	15.0
152i	9	15.5	152v	22	16.3
152j	10	16.9	152w	23	15.5
152k	11	15.4	152x	24	16.6
152l	12	16.2	152y	25	14.6
152m	13	14.9	152z	26	16.0

FIG. 16

TABLE 7 – Normal Nozzle Distribution	
Subinterval	Number of Nozzles within Subinterval
[14, 14.5)	1
[14.5, 15)	2
[15, 15.5)	4
[15.5, 16)	6
[16, 16.5)	7
[16.5, 17)	3
[17, 17.5)	2
[17.5, 18]	1

FIG. 17

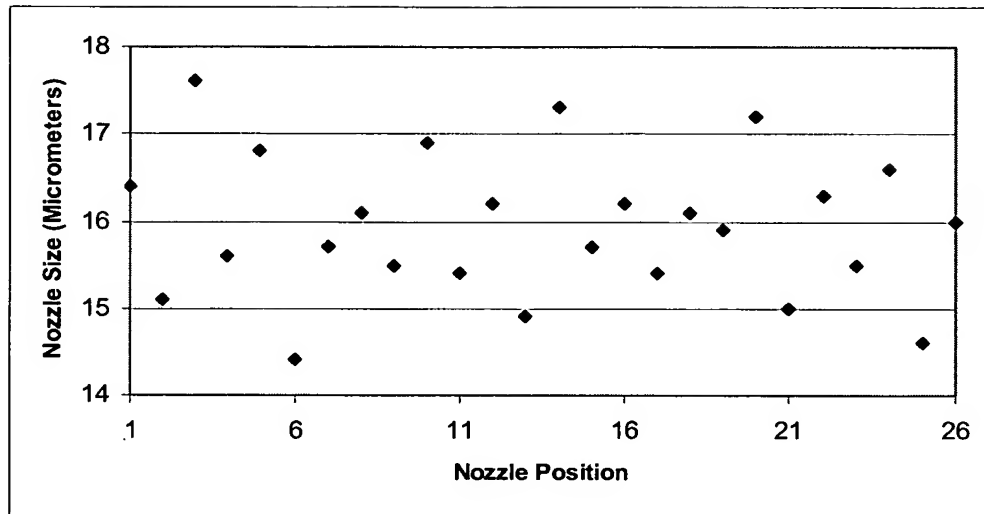


FIG. 18

TABLE 8 – Usage Pattern								
	Die							
	A		B		C		D	
	small	large	small	large	small	large	small	large
Intended Drop Volume	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Actual Drop Volume	5.4	7.3	4.5	6.2	5.2	7.6	5.1	6.9
Uncalibrated Mean Drop Volume	6.35		5.35		6.40		6.00	
Firing Ratio	68%	32%	12%	88%	67%	33%	50%	50%
Calibrated Mean Drop Volume	6.00		6.00		5.99		6.00	